

MARINE SCIENCE WITH DR KARYNA ROSARIO

TALKING POINTS

KNOWLEDGE:

1. Can you name the two marine biologists who mapped much of the world's uncharted waters and developed theories of natural selection respectively?
2. Who is often referred to as the father of marine biology?

COMPREHENSION:

3. Why are faecal indicator bacteria a popular choice for determining the microbial quality of water samples?
4. Why is this method potentially problematic?
5. Can you explain the benefits of the indicator Karyna is investigating?

APPLICATION:

6. Karyna uses a fish analogy to explain the difference between viral metagenomics and techniques that target specific viruses. Can you create your own analogy to explain the difference?

ANALYSIS:

7. Why is the PMMoV indicator a potentially better alternative to faecal indicator bacteria?
8. Why does Karyna believe science communication is becoming more and more important? Do you agree with the sentiments she expresses?

EVALUATION:

9. How much did you know about viruses before reading this article? Are you surprised by anything you have learned? If so, has this changed your perception of viruses?
10. Karyna lists skills and attributes she believes scientists need to be successful. Do you have any of these? What other skills and attributes do you think might be important in becoming a scientist?

ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

PUBLIC OUTREACH SCHEMES

The University of South Florida is home to an academic community that recognises the importance of public outreach activities. It has a community engagement webpage that is designed to help you learn about outreach events, including programmes to engage pre-college students in ocean sciences:

- <https://www.marine.usf.edu/community-engagement/>

Karyna's lab has organised many outreach activities to bring marine microbiology to students and the general public:

- <https://www.marine.usf.edu/genomics/outreach/>

WATER, VIRUSES AND GOOD INTENTIONS...

Karyna delivered her own TEDx Youth Talk where she shared her experience of trying to identify unsuspected viruses in reclaimed water. She also discusses the importance of communication and cooperation in good science:

- <https://www.youtube.com/watch?v=RHFYSdx7YBk>

MORE RESOURCES

Marine Science Today is an online magazine that provides readers with the latest news in marine science:

- <http://marinesciencetoday.com/>

ScienceDaily is a brilliant resource for all research news. It also has a section dedicated to the latest marine biology news, which should be of interest to those thinking of pursuing a career in the field:

- https://www.sciencedaily.com/news/plants_animals/marine_biology/